

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

BECKY'S BRONCOS, LLC;
JAMES BROAD; and REBECCA
MCCRENSKY;

Plaintiffs,

v.

TOWN OF NANTUCKET; and
NANTUCKET TOWN SELECT BOARD;

Defendant.

Case No. 24-11308

Expert Report of Igor Karagodsky, Ph.D.

May 28, 2024

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I. Overview

A. Qualifications

1. My name is Igor Karagodsky. I am an economist and Manager at Analysis Group, Inc. (“Analysis Group”), an international economic, financial, and strategy consulting firm.
2. I have over eight years of experience working on cases involving economic analyses of competition. Specifically, I specialize in the application of microeconomics, econometrics, and statistical methods to complex litigation matters. These include supporting experts in matters related to class certification, liability, commercial disputes, and damages across a range of industries, including finance, health care, and biotech. I hold a B.A. in economics and mathematics from Brandeis University. I also hold a Ph.D. in economics from Boston College, where my dissertation focused on topics in Corporate Finance.
3. A copy of my curriculum vitae, which includes a list of selected matters that I worked on is attached as **Appendix A**. The materials that I relied upon in this report are listed in **Appendix B**. I have been assisted on this report by staff at Analysis Group working under my direction.

B. Allegations and Assignment

4. Plaintiffs Mr. James Broad and Ms. Rebecca McCrensky own Becky’s Broncos LLC, a car rental business that operated in the town and county of Nantucket (“Nantucket”) in 2023.¹ They allege that the Town of Nantucket and the Nantucket Town Select Board (“Defendants”) denied licenses and medallions for their two vehicles due to an “anticompetitive, protectionist, and discriminatory Nantucket bylaw” that regulates car rentals in Nantucket.²
5. I have been retained by counsel for the Plaintiffs to opine from an economic perspective on whether the Nantucket Bylaw Chapter 58 (“Chapter 58”) likely affects competition among car rental businesses in Nantucket.

¹ Verified Complaint For Damages and Injunctive Relief, *Becky’s Broncos LLC et al. v. Town of Nantucket et al.*, May 16, 2024, United States District Court, District of Massachusetts, Civil No. 24-11308, (“Complaint”), ¶ 3.

² Complaint, ¶¶ 1-3.

II. Summary of Conclusions

6. A large number of visitors come to Nantucket every year, with over 70,000 people visiting the island in the summer months. This influx of visitors creates a substantial demand for car rentals on the island. However, the bylaw regulating car rentals in Nantucket (i) limits the number of car rentals on the island to 700 or less, (ii) assigns non-expiring car rental licenses (medallions) to only a few grandfathered car rental agencies that applied for licenses to operate on the island in 1996 – nearly 30 years ago,³ and (iii) does not require the medallions that it assigned to be used (or reassigned if not used).
7. In addition to these car rental constraints, the medallion assignment across car rental businesses on the island has remained largely unchanged, at least as documented from 2019.⁴ In practice, the few car rental businesses that were allowed to operate on the island did not transfer their medallions to other car rental agencies, even when these medallions were unused.
8. Together, these car rental restrictions both limit the total number of car rentals on the island, even during months with particularly high demand,⁵ and likely impose barriers to entry for new car rental businesses into Nantucket, which likely adversely impact consumers. That is, if new car rental businesses are foreclosed from entering, consumers likely have fewer rental agencies to choose from and compare the prices of.
9. These restraints to competition can potentially be mitigated with provisions that require the use of all or most of the assigned medallions, or reassignment of unused medallions, and

³ Complaint, ¶ 19.

⁴ Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” (henceforth “Agenda for Select Board Meeting”), December 19, 2018, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12192018-6884, p. 44 in pdf. *See also*, Agenda for Select Board Meeting, December 18, 2019, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12182019-8127, p. 180 in pdf; Agenda for Select Board Meeting, December 16, 2020, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12162020-9436, p. 131 in pdf; Agenda for Select Board Meeting, December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf; Agenda for Select Board Meeting, December 21, 2022, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12212022-12112, p. 79 in pdf.; Agenda for Select Board Meeting, December 11, 2023, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12112023-13289, p. 29 in pdf.

⁵ The literature points to the relationship between tourism and demand for car rentals. *See e.g.*, Vogel, H. L. *Travel Industry Economics*, Cambridge Books, 2013, pp 130-134. *See also* Noriega, Maria, Michelle Senser, and Ryan Lunsford., “Differentiation in the United States Rental Car Industry,” In 2016 International Academic Business Conference Orlando & 2016 International Education Conference Orlando, 2016, pp. 3-7.

provisions that allow for the entry of new car rental businesses (e.g., by not restricting medallions to grandfathered agencies and increasing the number of medallions beyond 700).

10. I offer my opinions based on the facts and information available to me at the time of filing this report. My opinions are formed to a reasonable degree of economic certainty.

III. Number of Residents and Visitors in Nantucket

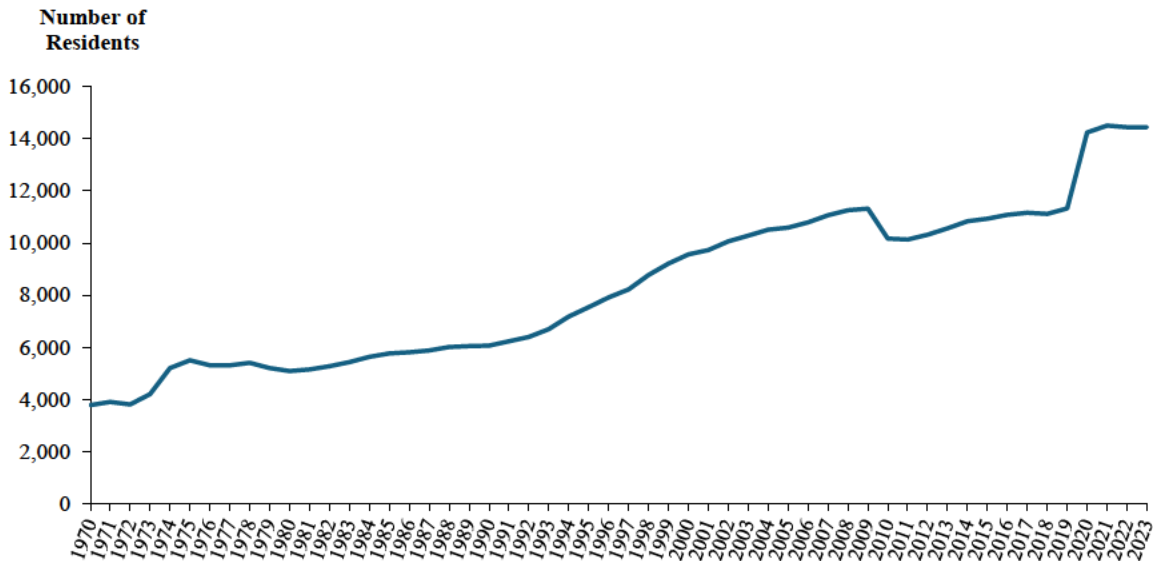
11. To assess the potential demand for car rentals in Nantucket, I first evaluate the total number of people on the island, including residents and visitors.

12. As shown in **Figure 1**, the number of residents on the island grew substantially over time, from 3,774 in 1970 to 14,444 in 2023.⁶ While some of these residents may have their own cars, population growth is generally consistent with increased economic activity, that may increase the need for car rentals on the island.⁷

⁶ Other sources point to even larger population on the island. Nantucket's permanent population based on a 2017 Effective Population Study amounted to 17,200 with seasonal residents adding another 11,000 people on the island. See "Projects," *Nantucket Data Platform*, available at <https://nantucketdatapatform.com/projects/>.

⁷ "Nantucket County vs. Massachusetts Comparative Trends Analysis: Population Growth and Change, 1969-2022," *Massachusetts REAP*, available at <https://massachusetts.reaproject.org/analysis/comparative-trends-analysis/population/tools/250019/250000/> ("Attracting and retaining people to live, work, raise a family, and retire underlies the economic vitality of any region. Population growth is both a cause--and a consequence--of economic growth. Patterns of population growth and change reflect differences among regions to attract and retain people both as producers and consumers in their economy.").

Figure 1
Number of Residents in Nantucket
1970-2023



Source: Federal Reserve Bank of St. Louis, Fred Economic Data, Resident Population in Nantucket County/town, MA, available at <https://fred.stlouisfed.org/series/MANANT9POP>.

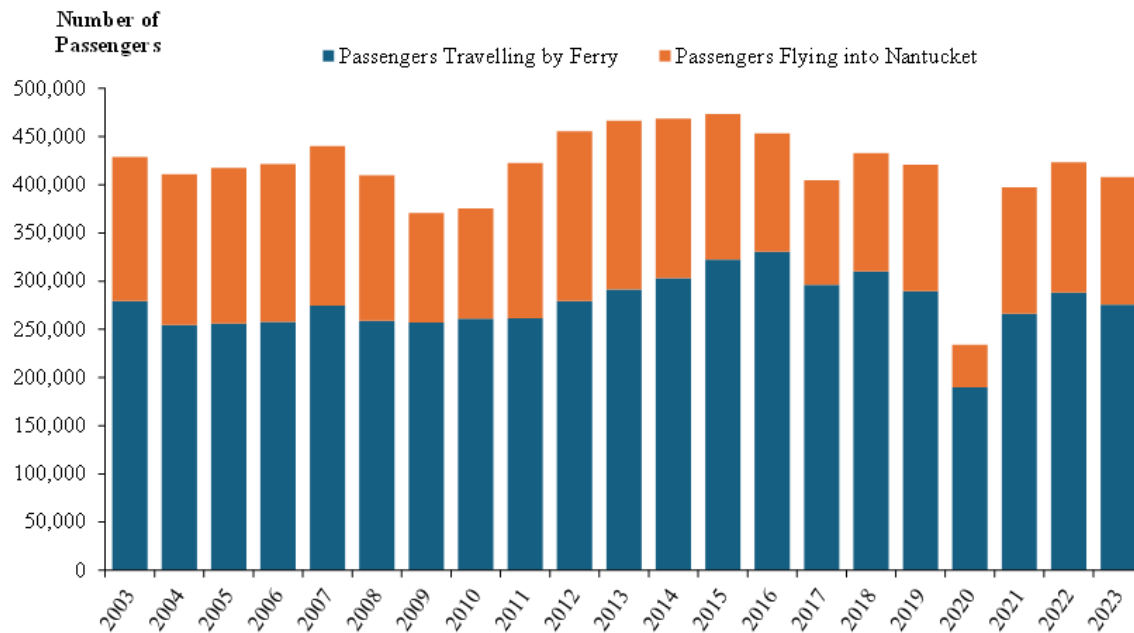
13. In addition to having a growing resident population, a substantial number of visitors come to the island every year, where tourism is one of the primary industries.⁸ **Figure 2** summarizes the number of visitors that traveled to the island by ferry (in blue), and the number of visitors that flew to Nantucket (in orange). As shown in the figure, in most years with the exception of 2020, when the Covid-19 outbreak started, there were approximately 400,000-500,000 visitor-trips to Nantucket every year.^{9,10}

⁸ See “Nantucket,” *Insider’s Guide to Nantucket*, available at <https://nantucket.net/community/>. See also, About Nantucket, available at <https://www.nantucket-ma.gov/1608/About-Nantucket>.

⁹ Other sources point to even larger number of visitor-tips to Nantucket. See “Projects,” *Nantucket Data Platform*, available at <https://nantucketdatapatform.com/projects/> (“We also counted 500,000 visitor-trips to the island in 2017, including 100,000 in August alone.”)

¹⁰ The number of visitor-trips may also include residents who are commuting for work. However, the share of commuters who report ferryboats as their means of transportation to work is limited in Nantucket to only about 173 out of 8,180 (or 2%) of workers. See “B08601 Means of Transportation to Work for Workplace Geography,” *U.S. Census Bureau*, available at https://data.census.gov/table/ACSDT5Y2022.B08601?q=carpool&g=050XX00US25019_060XX00US2501943790_160XX00US2543755.

Figure 2
Number of Visitor-Trips to Nantucket
2003-2023



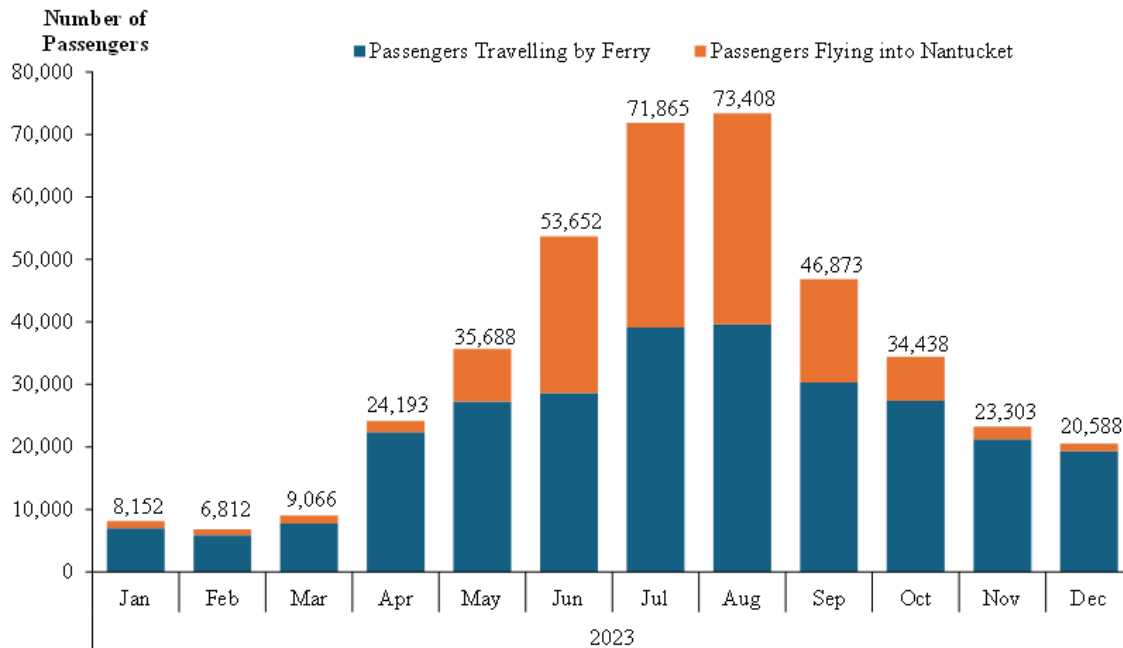
Sources:

[1] Bureau of Transportation Statistics T-100 Market data, available at https://www.transtats.bts.gov/Data_Elements.aspx?Data=1.

[2] Woods Hole, Martha's Vineyard And Nantucket Steamship Authority, Traffic Statistics, available at https://www-steamship-assets.s3.amazonaws.com/versioned_downloadable_forms/path/january_2024_monthly_traffic_statistics.pdf.

14. Notably, the inflow of visitors into Nantucket is highly seasonal. For example, **Figure 3** summarizes the number of visitors to Nantucket in every month in 2023, breaking down the number of passengers who traveled to the island by ferry (blue bar) and by air (orange bar). As can be seen from the figure, the number of visitors to Nantucket grew substantially from 6,812 in February 2023 to more than 10 times as much in July and August 2023, with 71,865 and 73,408 visitors, respectively. This significant rise in the number of visitors on the island highlights the substantial potential demand for car rentals, particularly over the summer months.

Figure 3
Number of Visitor-Trips to Nantucket
2023



Sources:

[1] Bureau of Transportation Statistics T-100 Market data, available at https://www.transtats.bts.gov/Data_Elements.aspx?Data=1.

[2] Woods Hole, Martha's Vineyard And Nantucket Steamship Authority, Traffic Statistics, available at https://www-steamship-assets.s3.amazonaws.com/versioned_downloadable_forms/path/january_2024_monthly_traffic_statistics.pdf.

15. Taken together, the growth in the number of residents in Nantucket over time along with the substantial number of visitors on the island, reaching over 70,000 people in July and August 2023, highlight the need for car rentals on the island. Some visitors chose to bring their own cars, or cars that they rented off the island, on a ferry to Nantucket. However, the number of such cars remained fairly limited relative to the number of visitors to Nantucket, reaching only 5,469-5,666 cars in July and August 2023.¹¹ This further underscores the demand for car rentals in Nantucket, particularly over the summer months, and/or major national holidays.

¹¹ Given that “[a] round trip passage is counted as two” in the source, I divide the number of trips by two. *See* Woods Hole, Martha's Vineyard And Nantucket Steamship Authority, Traffic Statistics available at https://www-steamship-assets.s3.amazonaws.com/versioned_downloadable_forms/path/january_2024_monthly_traffic_statistics.pdf.

IV. Regulation of Car Rentals in Nantucket

16. I understand from counsel that Nantucket Bylaw Chapter 58 governs car rentals on the island.

- a. Specifically, I understand that this bylaw was amended in 1997 to limit the number of cars for rent in Nantucket to 650.¹² The 650 medallions to operate car rentals in Nantucket were split only between the car rental agencies that were licensed to operate on the island at the time, based on the number of cars and stickers awarded in response to their application for licensing in 1996 – nearly 30 years ago.¹³ Each medallion granted its holder a non-expiring right to lease one car on the island.¹⁴
- b. I also understand that Chapter 58 was subsequently amended to slightly increase the number of medallions. In its current form, Chapter 58 states, among other provisions, that:

“The total number of motor vehicles available for lease on the island of Nantucket shall not exceed 700. The Select Board shall issue each rental agency one rental vehicle medallion (RVM) for each motor vehicle listed in its 1996 application and which received a rental sticker. Each RVM constitutes the nonexpiring right to lease one motor vehicle. A rental agency shall possess one RVM for each motor vehicle listed in its application beginning in 1998”¹⁵ (emphasis added).

17. Importantly, in addition to imposing a hard cap of 700 medallions, I understand that Chapter 58 does not require the few car rental businesses that received medallions to actually use them, or the re-assignment of unused medallions to other car rental businesses. This is an important element given that a substantial number of the assigned medallions have been unused.

¹² Complaint, ¶ 19.

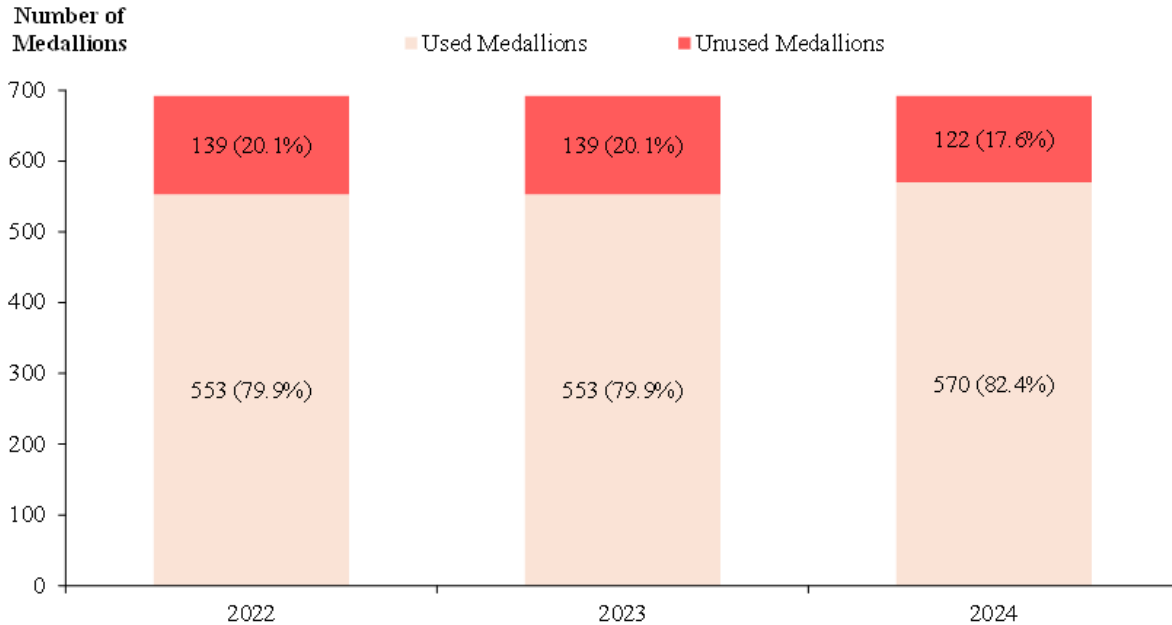
¹³ Complaint, ¶ 19.

¹⁴ Complaint, ¶ 19.

¹⁵ Town of Nantucket, Registration of Car Rental Agencies, Chapter 58, § 58-3 Annual fee; issuance of licenses and stickers, available at: <https://ecode360.com/11470668#11470674>.

18. In 2022, the town of Nantucket started publishing data on the number of unused medallions in each year.¹⁶ **Figure 4** summarizes the number of used and unused medallions in 2022-2024 in Nantucket. As shown in the figure, out of the 692 medallions that were assigned in each year in 2022-2024, 122-139 (or 17.6%-20.1%) were unused.

Figure 4
Number of Used and Unused Medallions in Nantucket
2022-2024



Sources:

- [1] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf.
- [2] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 21, 2022, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12212022-12112, p. 79 in pdf.
- [3] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 11, 2023, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12112023-13289, p. 29 in pdf.

19. **Figure 5** breaks down the number of assigned and unused medallions for each car rental agency from 2022 to 2024. This figure demonstrates that Hertz Rent-A-Car, the car rental business that received the most medallions on the island, had 120-134 (or 38.7% - 43.2%) of its medallions unused between 2022 and 2024. Other car rental businesses such as Nantucket

¹⁶ To my knowledge, Nantucket did not provide a breakdown of used and unused medallions prior to 2022, but there is evidence of unused medallions even before 2022. *See e.g.*, Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 (“Every year over past 5 years, Hertz has NOT used an average of 75 medallions per year (60-140)” (emphasis in the original quote)).

Windmill Auto and Affordable Rentals of Whitman, Inc. had the same number of medallions over 2022-2024 even though they did not use all of them in 2022 and 2023. Finally, Nantucket Car Rental appears to keep its two medallions in 2024, even though it has not used them. Notably, given that Nantucket assigned *non-expiring* medallions to these car rental businesses, it does not incentivize them to ensure that the assigned medallions are used, or transfer unused medallions to other car rental businesses.

Figure 5
Number of Medallions by Car Rental Business in Nantucket
2022-2024

Rental Car Agencies	2022		2023		2024	
	Assigned	Unused	Assigned	Unused	Assigned	Unused
Hertz Rent-A-Car	310	134	310	134	310	120
Nantucket Windmill Auto	187	1	187	1	187	0
Nantucket Island Rent-A-Car	93	0	93	0	93	0
Affordable Rentals of Whitman, Inc.	70	4	70	4	70	0
Young's Bike Shop	30	0	30	0	30	0
Nantucket Car Rental	2	0	2	0	2	2
Total	692	139	692	139	692	122

Sources:

[1] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf.

[2] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 21, 2022, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12212022-12112, p. 79 in pdf.

[3] Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 11, 2023, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12112023-13289, p. 29 in pdf.

20. Finally, Chapter 58 states that medallions “are transferable, with or without consideration, to any other rental agency or entity.”¹⁷ However, **Figure 5** demonstrates that the allocation of medallions across car rental agencies remained unchanged in 2022-2024. Based on data on the assigned medallions for 2019-2024, car rental agencies on the island kept the medallions

¹⁷ Town of Nantucket, Registration of Car Rental Agencies, Chapter 58, § 58-3 Annual fee; issuance of licenses and stickers, available at: <https://ecode360.com/11470668#11470674>.

that they were assigned every single year, whether used or unused, and did not transfer them to other car rental businesses.^{18,19}

21. Ultimately, as I describe in greater detail in **Section V** below, from an economic perspective, the deficiencies of Chapter 58 likely create barriers for new car rental businesses from entering Nantucket, thereby limiting competition that likely adversely impacts consumers.

V. Likely Implications of Chapter 58 on Competition among Car Rental Businesses

22. As discussed in **Sections III and IV**, the current regulations of car rentals in Nantucket (i) impose a hard cap on medallions, allowing no more than 700 cars to be rented on the island, (ii) assign these limited medallions only to a few selected car rental businesses that operated on the island as of 1996, and (iii) do not require the car rental businesses that received medallions to use them, or re-assign unused medallions to other car rental businesses. In practice, the allocations of medallions across car rental agencies remained largely unchanged at least as documented from 2019,²⁰ and the few car rental agencies that received medallions

¹⁸ Agenda for Select Board Meeting, December 19, 2018, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12192018-6884, p. 44 in pdf. *See also*, Agenda for Select Board Meeting, December 18, 2019, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12182019-8127, p. 180 in pdf; Agenda for Select Board Meeting, December 16, 2020, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12162020-9436, p. 131 in pdf; Agenda for Select Board Meeting, December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf; Agenda for Select Board Meeting, December 21, 2022, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12212022-12112, p. 79 in pdf.; Agenda for Select Board Meeting, December 11, 2023, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12112023-13289, p. 29 in pdf.

¹⁹ In 2021, the Select Board of the Town of Nantucket withdrew 10 medallions that were assigned to a rental car agency named Island Buggies (“The License and Medallions for Island Buggies was transferred in 2016 from Wayne Siltanen to Dolly Siltanen. Since that time, the business has not been in operation in any way.”) To my knowledge, the Select Board never re-assigned any of the medallions that were assigned to Island Buggies to other car rental businesses (“The Select Board must also determine whether to retire or re-issue the 8 medallions (2 additional medallions were previously issued to Island Buggies on top of the 700 allowed by bylaw[]). If the Select Board votes to re-issue, a process must be identified for fair opportunity to apply for a new license/medallions. Licensing currently has at least 5 registered requests for a new license.”) *See*, Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 131 in pdf.

²⁰ Agenda for Select Board Meeting, December 19, 2018, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12192018-6884, p. 44 in pdf. *See also*, Agenda for Select Board Meeting, December 18, 2019, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12182019-8127, p. 180 in pdf; Agenda for Select Board Meeting, December 16, 2020, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12162020-9436, p. 131 in pdf; Agenda for Select Board Meeting, December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf.

kept them as long as they paid the required annual fees,²¹ even when these medallions were unused.

23. In this section, I discuss the implications of these car rental restrictions on competition between car rental agencies, and the ability (or lack thereof) of new car rental agencies to enter Nantucket.

A. Implications of Chapter 58 on Competition from New Car Rental Agencies

24. Together, the car rental restrictions described above imposed by Chapter 58 limit the total number of car rentals on the island, even during months with particularly high demand, and likely impose barriers to entry for new car rental businesses into Nantucket. These constraints likely adversely impact consumers. For example, to the extent that new car rental businesses are foreclosed from entering Nantucket (or are substantially delayed), consumers are likely left with fewer rental agencies to choose from and compare the prices of. These constraints to competition are particularly prevalent during the summer months, when there is soaring demand for car rentals, which likely limits consumer choice and likely impacts pricing even further.
25. Given the limitations on car rentals in Nantucket, it is unsurprising that Turo, a platform that allows residents to rent out their own cars, gained popularity on the island. For example, in a letter to the Select Board of the Town of Nantucket from Mr. John H. Perten, counsel for Nantucket Island Rent-A-Car and Affordable Rentals, it was noted that Affordable Rentals identified 153 car rentals listed on Turo in Nantucket.²² I find a similar count of 164 cars currently available on Turo in Nantucket when filtering for availability from July 29-31, 2024

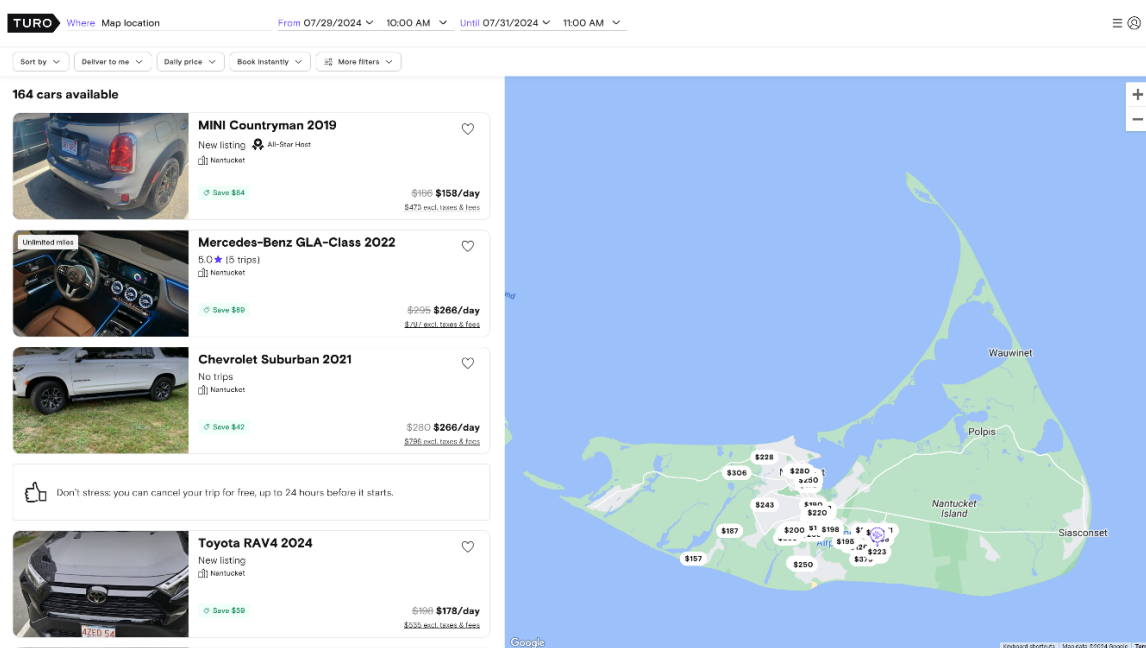
ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf; Agenda for Select Board Meeting, December 21, 2022, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12212022-12112, p. 79 in pdf.; Agenda for Select Board Meeting, December 11, 2023, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12112023-13289, p. 29 in pdf.

²¹ See e.g., Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 132 in pdf (“The License and Medallions for Island Buggies was transferred in 2016 from Wayne Siltanen to Dolly Siltanen. Since that time, the business has not been in operation in any way. Each year the unused medallions have been paid for at \$100 per medallion. The medallions were not paid for or used for 2021. An attempt to pay for them was made in November 2021. [...] It is recommended the Select Board vote for non-renewal of the license.”).

²² Letter titled “Illegal Car Rentals,” from John H. Perten to the Select Board of Town of Nantucket, July 28, 2023, available at <https://nantucket-current.nyc3.cdn.digitaloceanspaces.com/assets/illegal-rental-cars.pdf>.

as shown in **Figure 6**. I find even higher availability of over 200 cars when filtering for dates in non-summer months (e.g., March 11-13, 2025) – almost 30 percent of the 700 current medallion cap on Nantucket.²³ The substantial availability of cars through Turo, further underscores the need for car rentals in Nantucket.

Figure 6
Cars Available on Turo, July 29-31, 2024



Source:

Turo.com, accessed on May 8, 2024.

B. Implications of Chapter 58 in the Context of the Academic Literature

26. The implications of restraints to competition are well established in the economic literature. Economists explain that “[b]asic economic theory demonstrates that when firms have to compete for customers, it leads to lower prices, higher quality goods and services, greater variety, and more innovation.”²⁴ They further note that “[w]hen there is insufficient competition, dominant firms can use their market power to charge higher prices, offer decreased quality, and block potential competitors from entering the market—meaning

²³ See Backup Materials.

²⁴ Boushey, Heather and Helen Knudsen, “The Importance of Competition for the American Economy”, *The White House*, available at: <https://www.whitehouse.gov/cea/written-materials/2021/07/09/the-importance-of-competition-for-the-american-economy/#> ftn1.

entrepreneurs and small businesses cannot participate on a level playing field and new ideas cannot become new goods and services.”²⁵

27. Economists and regulators have also studied mechanisms to allocate operating licenses similar to the ones for car rentals in Nantucket.²⁶ A common characteristic in these studies is that the licenses are offered in limited supply, which can be due to physical constraints (e.g., broadcasting licenses, airport takeoff and landing slots) or restrictions imposed by local authorities (e.g., liquor licenses, taxi medallions). Notably, Gale and O’Brien (2013) explain that “[a]ntitrust and regulatory authorities have historically been concerned with two possible inefficiencies in industries with scarce capacity. One is the standard welfare loss that occurs if a firm is dominant and restricts output. A second possibility is that trading of capacity may not enhance welfare”²⁷ (emphasis added).

- a. Regarding the first concern, economists have shown that “[i]n an industry with scarce capacity, a firm may benefit from leaving some of its capacity idle and keeping output below the socially optimal level. If rival firms are capacity constrained, they may be unable to expand and offset the output reduction”²⁸ (emphasis added). Consistently, as shown in **Figure 5**, Hertz Rent-a-Car kept up to 43.2% (i.e., 134) of its 310 medallions unused, when there were “at least 5 registered requests for a new license.”²⁹ As such, in

²⁵ Boushey, Heather and Helen Knudsen, “The Importance of Competition for the American Economy,” *The White House*, available at: https://www.whitehouse.gov/cea/written-materials/2021/07/09/the-importance-of-competition-for-the-american-economy/#_ftn1.

²⁶ See e.g., Borenstein, Severin, “On the Efficiency of Competitive Markets for Operating Licenses,” *The Quarterly Journal of Economics*, Vol. 103, No. 2, May, 1988, pp. 357-385 (henceforth, “Borenstein, 1988”); Grether, David M., R. Mark Isaac, and Charles R. Plott, “The Allocation of Landing Rights by Unanimity Among Competitors,” *The American Economic Review*, Vol. 71, No. 2, May, 1981, pp. 166-171; Milgrom Paul and Ilya Segal, “Clock Auctions and Radio Spectrum Reallocation,” *Journal of Political Economy*, 2020, Vol. 128, No. 1, pp. 1-31; Seim, Katja and Joel Waldfogel, “Public Monopoly and Economic Efficiency: Evidence from the Pennsylvania Liquor Control Board’s Entry Decisions,” *American Economic Review*, Vol. 103, No. 2, April, 2013, pp. 831–862; Frankena, Mark W. and Paul A. Pautler, “An Economic Analysis of Taxicab Regulation,” *Federal Trade Commission, Bureau of Economics Staff Report*, May 1984.

²⁷ Gale, Ian, and Daniel P. O’Brien, “The Welfare Effects of Use-or-Lose Provisions in Markets with Dominant Firms,” *American Economic Journal: Microeconomics*, Vol. 5, No. 1, February 2013, pp. 175-193 (henceforth, “Gale and O’Brien, 2013”), at p. 175.

²⁸ Gale and O’Brien, at p. 175. See also, Stigler, George J., “Notes on the Theory of Duopoly,” *Journal of Political Economy*, Vol. 48, No. 4, Aug 1940, pp. 521-541.

²⁹ Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, pp. 131-132 in pdf.

2022-2023, Chapter 58 allowed for an allocation where only 553 of the 700 medallions were used. Ultimately, an increase in the usage of medallions likely would have enhanced consumer welfare.

- b. Regarding the second concern, economists explain that even if transferring of licenses is allowed, that does not necessarily mean that it enhances consumer welfare.³⁰ While Chapter 58 allows for transferring of medallions, it does not prevent car rental agencies from hoarding these medallions. Indeed, in 1999 the Select Board allocated 167 out of the 684 medallions to Hertz Rent-a-Car.³¹ However, from 2019, Hertz Rent-a-Car holds 310 of the 692 medallions in Nantucket, suggesting that over 1999-2019, other rental car agencies on the island likely transferred medallions to Hertz Rent-a-Car.

Kleit and Kobayashi (1996) explain that “hoarding” is likely anticompetitive when (1) firm market share is negatively related to usage,³² and (2) when firms with large capacity refuse to sell part of it to potential new entrants at competitive rates.³³ As shown in **Figure 5**, Hertz Rent-a-Car has the highest number of both *assigned* and *unused* medallions in Nantucket, and I did not see any evidence of transferring of medallions to new entrants.³⁴ For example, when Plaintiff Rebecca McCrensky reached out to Amy Baxter, Nantucket’s

³⁰ See Borenstein, 1988, at pp. 357-358 (“a competitive market allocation of operating licenses, whether attained through auctioning, selling, or allowing resale of the rights, does not, in general, assure their efficient use [...] profits can be poorly correlated with the gain in total surplus from a firm’s operations.”)

³¹ Complaint, Exhibit 5.

³² Kleit, Andrew N. and Bruce H. Kobayashi, “Market Failure of Market Efficiency? Evidence on Airport Slot Usage,” *Research in Transportation Economics*, Vol. 4, 1996, pp. 1-32 (henceforth “Kleit and Kobayashi, 1996”), at p. 7 (“In the context of an airport slot market, this implies that larger carriers will use their slots less intensively than the smaller ‘fringe’ carriers. Conversely, if slots are being used efficiently, the larger carriers’ slot usage would be as great or greater than slot usage by smaller carriers. The testable implication of such a procompetitive theory is that slot usage will be positively related to the market share of the carrier using the slot. In contrast, the anticompetitive theory implies the reverse, that is, that the dominant or colluding carriers will use their slots less than the competitive fringe.”).

³³ Kleit and Kobayashi, 1996, at p. 7 (“Another form of the anticompetitive hypothesis is that dominant carriers would be unwilling to sell slots to potential new entrants at competitive rates, but instead would lease slots to selected other carriers, their purpose being to deter entry into HDTAs by carriers likely to increase overall slot use.”).

³⁴ I am only aware of a single recent transfer of medallions to “Island Buggies” whose medallions were eventually withdrawn. See footnote 16. See also, Town and County of Nantucket Select Board, “Agenda for the Meeting of the Select Board,” December 15, 2021, available at https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Agenda/_12152021-10889, p. 131 in pdf (“The License and Medallions for Island Buggies was transferred in 2016 from Wayne Siltanen to Dolly Siltanen.”).

Business License Manager, to explore the possibility of getting medallions for its rental cars, Ms. Baxter noted that “[a]s it stands now there are no available medallions under the bylaw that caps Rental Cars at 700” without indicating that there were unused medallions that could be transferred, or new medallions that could be allocated.³⁵

28. The barriers to entry imposed by Chapter 58 likely limit competition between car rental agencies in Nantucket. Economists explained that “if any incumbent is inefficient or charges excessive prices or exploits consumers in any other way, successful entry must be possible and profitable.”³⁶ They further note that, “potential entry or competition *for* the market disciplines behavior almost as effectively as would actual competition *within* the market”³⁷ (emphasis in the original quote). As such, by not providing a clear path for new car rental agencies to operate in Nantucket, Defendants engage in conduct that likely restrains competition.
29. Notably, regulators in other industries have attempted to mitigate the risks of such negative effects on consumer welfare in markets with scarce capacity by imposing *use-or-lose provisions*. For example, to prevent airline carriers from hoarding takeoff and landing slots in airports, the Federal Aviation Administration (FAA) imposed in 1985 a use-or-lose provision that requires airline carriers to meet minimum-use requirements for their assigned takeoff/landing slots or risk losing them.³⁸ Hardaway (1986) explained that “[t]he ‘lose it or use it’ provision of the Rule, combined with antitrust enforcement, would prevent anticompetitive behavior in buying slots to keep out a competitor.”³⁹ Similarly, the Federal Communications Commission (FCC) imposed minimum-use requirements to prevent hoarding of radio spectrums.⁴⁰

³⁵ See Complaint, Exhibit 8, at p. 7.

³⁶ Bailey, Elizabeth E., “Contestability and the Design of Regulatory and Antitrust Policy,” *The American Economic Review*, Vol. 71, No. 2, May, 1981), pp. 178-183 (henceforth “Bailey, 1981”) at p. 178.

³⁷ Bailey, 1981, at p.179.

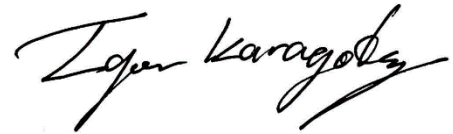
³⁸ Gale, Ian, and Daniel P. O’Brien, “The Welfare Effects of Use-or-Lose Provisions in Markets with Dominant Firms,” *American Economic Journal: Microeconomics*, February 2013, Vol. 5, No. 1, p. 176.

³⁹ Hardaway, Robert M., “The FAA Buy-Sell Slot Rule: Airline Deregulation at the Crossroads,” *Journal of Air Law and Commerce*, Vol. 52, Issue 1, 1986, pp. 1-75 at pp. 7-8.

⁴⁰ Gale, Ian, and Daniel P. O’Brien, “The Welfare Effects of Use-or-Lose Provisions in Markets with Dominant Firms,” *American Economic Journal: Microeconomics*, February 2013, Vol. 5, No. 1, p. 176.

30. Ultimately, Chapter 58 allows for an allocation of a limited set of 700 non-expiring medallions only to a few select car rental businesses. This regulation likely forecloses competition because it does not require medallions to be reassigned if not used, and it does not consider allocating new or unused medallions to new car rental agencies. This potential foreclosure of competition is likely to limit the consumer's car rental options and ability to compare prices.

Igor Karagodsky, PhD

A handwritten signature in black ink, appearing to read "Igor Karagodsky", written over a horizontal line.

May 28, 2024

APPENDIX A

IGOR KARAGODSKY, PH.D. Manager

Direct: 617 425 8303
Fax: 617 425 8001
igor.karagodsky@analysisgroup.com

111 Huntington Avenue
14th Floor
Boston, MA 02199

Dr. Karagodsky is an economist with over eight years of consulting experience. He specializes in the application of microeconomics, econometrics, and statistical methods to complex litigation matters. He has supported experts in matters related to class certification, liability, commercial disputes, and damages analysis across a range of industries, including finance, health care, and biotech.

Dr. Karagodsky's recent work has included analysis of alleged restraints to competition, damages, and liability issues in matters pertaining to market entry of branded and generic drugs, competition between medical service providers, patent infringements, pharmaceutical marketing and sales practices, and data breaches. In these cases, Dr. Karagodsky assisted experts with drafting reports, preparing for deposition and trial, and constructing econometric models to estimate the impact of restraints to competition on pricing trends, firm profitability, and lost revenue.

Prior to joining Analysis Group, Dr. Karagodsky was a consultant at an economic consulting firm, as well as a lecturer in statistics at Boston College. He also served as a publication referee for the *Journal of Banking and Finance*.

EDUCATION

2017	Ph.D., economics (<i>concentration: corporate finance</i>), Boston College
2014	M.A., economics, Boston College
2010	B.A., economics and mathematics (<i>summa cum laude</i>), Brandeis University

PROFESSIONAL EXPERIENCE

2016–2024	Analysis Group, Inc. <i>Manager (2020–Present)</i> <i>Associate (2017–2019)</i> <i>Associate Intern (2016)</i>
2015	The Brattle Group <i>Associate Intern</i>
2012–2014	Compass Lexecon <i>Analyst</i>

SELECTED CONSULTING EXPERIENCE

Antitrust and Health Care

- ***In re: Opana ER Antitrust Litigation***
US District Court, Northern District of Illinois
Case No. 1:14-cv-10150
- ***Value Drug Company v. Takeda Pharmaceuticals, U.S.A., INC., et al.***
US District Court, Eastern District of Pennsylvania
Civil Action No. 21-3500
- ***Sandoz Inc., et al. v. United Therapeutics Corp., et al.***
US District Court, District of New Jersey
Case No. 3:19-cv-10170-BRM-LHG
- ***Painters and Allied Trades District Council 82 Health Care Fund, et al. v. Takeda Pharmaceutical Company Limited, et al.***
US District Court, Central District of California
Case No. 2:17-cv-07223-JWH-AS
- ***In re: Xyrem (Sodium Oxybate) Antitrust Litigation***
US District Court, Northern District of California
Case No. 3:20-md-02966-RS-SVK
- ***In re: Actos Antitrust Litigation***
US District Court, Southern District of New York
Master File No. 1:13-cv-09244 (RA) (SDA)
- ***Federal Trade Commission, et al. v. Vyera Pharmaceuticals, LLC, et al.***
US District Court, Southern District of New York
Civil Action No. 20-cv-00706
- ***Dorothy Forth, et al. v. Walgreen Co.***
US District Court, Northern District of Illinois
Case No. 1:17-cv-02246
- ***In re: Loestrin 24 Fe Antitrust Litigation***
US District Court, District of Rhode Island
Case No. 1:13-md-02472
- ***Humana Inc. v. Bausch Health Cos. Inc., et al.***
US District Court, Northern District of California
Case No. 3:2020cv05251
- ***Johnson & Johnson Health Care Systems Inc. v. Save On SP, LLC***
US District Court, District of New Jersey
Civil Action No. 22-2632(JKS)(CLW)
- ***In re: Effexor XR Antitrust Litigation***
US District Court, District of New Jersey
Civil Action No. 3:11-cv-5661 (PGS)(LHG)

- ***In re: National Prescription Opiate Lit.-Rite Aid***
US District Court, Northern District of Ohio
Multidistrict Litigation 2804
- ***In re: Broiler Chicken Antitrust Litigation – Mountaire Farms, Inc.***
US District Court, Northern District of Illinois
Case No. 1:16-cv-08637
- ***Juan Flores-Mendez, et al. v. Zoosk Inc.***
US District Court, Northern District of California
Case No. C 20-04929 WHA
- ***New Mexico Oncology and Hematology Consultants Ltd. v. Presbyterian Healthcare Services, et al.***
US District Court, District of New Mexico
Case No. D-202-CV-201909651

Other (Intellectual Property, Commercial Disputes, Finance, and Energy)

- ***Abbott Cardiovascular Systems Inc., et al. v. Edwards - Stamm Lifesciences Corp., et al.***
US District Court, District of Delaware
Civil Action No. 19-149 (MN)
- ***USA ex rel. Yoash Gohil v. Sanofi-Aventis***
US District Court, Eastern District of Pennsylvania
Civil Action No. 02-2964
- ***Liubov Skibo, et al. v. Greer Laboratories Inc., et al.***
US District Court, Western District of North Carolina
Civil Action No. 5:13-CV-00110-MOC-DSC
- ***In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation***
US District Court, District of New Jersey
Case No. 1:19-md-02875-RBK-SAK
- ***Phoenix Light SF Limited, et al. v. BNY Mellon***
US District Court, Southern District of New York
Case No. 1:14-cv-10104
- ***Lou Baker, et al. v. SeaWorld Entertainment, Inc.***
US District Court, Southern District of California
Case No. 14-cv-2129-MMA (AGS)
- Provided an analysis of the economic impacts associated with mandatory energy labeling on behalf of the Greater Boston Real Estate Board.

APPENDIX B MATERIALS RELIED UPON

Court Documents

Verified Complaint (and Related Exhibits) For Damages and Injunctive Relief, *Becky's Broncos LLC et al. v. Town of Nantucket et al.*, May 16, 2024, United States District Court, District of Massachusetts, Civil No. 24-11308.

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Documents from the Nantucket Select Board

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